

## Section 7





# **FIRE PREVENTION PLAN**

**SAR Metals Ltd**

**3 Manby Road  
South Killingholme  
Immingham  
DN40 3DX**

## Issue and Revision Record

| Revision   | Date       | Originator           | Description of Changes                 |
|------------|------------|----------------------|----------------------------------------|
| V0.1 Draft | 01/12/2025 | Olive Compliance Ltd | New application for permit application |
|            |            |                      |                                        |
|            |            |                      |                                        |
|            |            |                      |                                        |

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ANNEX A: SITE PLANS

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ANNEX C: RECEPTOR INFORMATION

## 1.0 Introduction

### 1.1 Site Introduction

This document has been prepared by Olive Compliance Ltd on behalf of SAR Metals Ltd.

The document provides a structured framework approach in effectively preventing potential fires associated with the processing and storage operations at the site.

This Fire Prevention Plan document (referred hereafter as the 'FPP') has been produced in accordance with the updated Environment Agency's Fire Prevention Plan Guidance (published 29<sup>th</sup> July 2016, updated 4<sup>th</sup> May 2018 and 9<sup>th</sup> January 2021).

This Fire Prevention Plan meets the fundamental objective of the FPP Guidance as it demonstrates that the site can:

- Minimise the likelihood of a fire happening;
- Aim for fire to be extinguished within 4 hours; and
- Minimise the spread of fire within the site and to neighbouring sites.

## 2.0 Structure of the Fire Prevention Plan

This FPP has been structured in accordance with the EA Fire Prevention Plan Guidance and considers the following relevant aspects of the facility:

- Managing Common Causes of Fire;
- Preventing Self Combustion;
- Managing Waste Piles;
- Preventing Fire Spreading;
- Quarantine Area;
- Detecting Fires;
- Suppressing Fires;
- Firefighting Techniques;
- Water Supplies;
- Managing Fire Water;
- Site Remediation.

### 2.1 Status of the Fire Prevention Plan

The FPP is a "live" document and will form part of the key environmental management document for the facility. All monitoring procedures, responsibilities and compliance actions will be updated as and when required.

## 3.0 Fire Prevention Plan

This FPP has been prepared in order to mirror the contents of the EA guidance for FPP to allow for ease of assessment and for users of this document to readily locate the specific information and on-site provisions relating to each particular topic.

### 3.1 Fire Prevention Objectives

This FPP identifies measures to be employed to reduce the likelihood of fires at the site. In addition, the plan identifies measures to be employed in the event of a fire in order to limit the damage caused to the environment or human health.

As such, and in accordance with EA guidance, the objectives of this FPP are to:

- minimise the likelihood of a fire happening
- aim for a fire to be extinguished within 4 hours
- minimise the spread of fire within the site and to neighbouring sites

### 3.2 Exclusions

The EA guidance for FPP states that the guidance does not apply to:

- hazardous wastes
- dangerous substances (i.e. those under Control of Major Accident Hazard Regulations)
- combustible liquids

This guidance also does not apply to the storage of coal, materials, or wastes that are:

- hazardous – excluding WEEE, but including hazardous waste batteries accepted as a separate waste stream, covered by Sector Guidance Note 5.06
- dangerous substances stored under the Control of Major Accident Hazards Regulations
- liquids
- healthcare wastes, covered by Sector Guidance Note 5.06 or Healthcare waste: appropriate measures for permitted facilities

## 4.0 Types of Combustible Wastes

### 4.1 Combustible Waste Streams

- Incoming mixed metals
- Cable
- Batteries
- Plastic arising from the treatment of (WEEE)

## Fire Prevention Plan

- WEEE Wastes

#### 4.2 Other Combustible Wastes

General Waste - cardboard, paper, wood will be created on site and stored temporarily awaiting recovery off site.

Diesel, for the site's mobile plant, will be stored externally within a self-bunded container 220lts (Storage of fuel is covered in Section 7.1).

Maintenance oils and fluids are stored in the workshop building away from any waste activity in the locked COSHH storage area.

#### 4.4 Persistent Organic Pollutants (POPs)

Persistent organic pollutants (POPs) can be present in waste and can have significant effects on human health and the environment. They are subject to the POPs regulations 2019 – UK SI.2019 No.1099, implementing Regulation (EU) 2019/1021. These regulations specify the appropriate treatment for the recovery and disposal of POPs.

An assessment of the proposed WEEE types using guidance notes (Classify different types of waste - Electronic and electrical equipment) has been conducted.

WEEE waste is to be accepted, primarily arising from commercial, industrial and household sources.

If a waste type is likely to contain POPs, then the company must assume that it does until they have evidence to prove otherwise, for example, through analysis. Any waste containing POPs will be segregated from other waste and will be stored separately.

WEEE often has components that contain hazardous substances or persistent organic pollutants (POPs).

At SAR these could include:

- printed circuit boards
- plastic casings, cables and other components
- capacitors
- Ni-Cd batteries

All WEEE that may contain or containing POP's components as defined by Regulation (EU) 2019/1021 on persistent organic pollutants, is managed in full compliance with the regulation.

POPs-containing WEEE and material fractions are segregated from non-hazardous WEEE and non-POPs materials and are not recycled.

Where POPs are present, the waste is directed from SAR to appropriately permitted facilities for recovery and treatment that ensures the POP content is destroyed or irreversibly transformed, typically through incineration or equivalent thermal treatment.

Downstream contractors are subject to due diligence checks to confirm regulatory compliance and appropriate treatment methods.

Wastes containing POPs from other waste and store it separately. The location of waste containing POPs is shown on

the site plans.

The acceptance, quarantine, storage and recovery of waste including POPs wastes be covered in the site Environmental Management System procedures.

If there is a fire, the Fire and Rescue Service (FRS) will be informed that there are wastes containing POPs on site. If there is a fire involving POPs waste then any residue from the fire may contain POPs and so will need to be segregated and treated following the POPs regulations. This could include firefighting water.

## 5.0 Use of this Document

This FPP forms part of the environmental management system for the site. It is prepared for use as a standalone document, such that all staff can easily refer to any information or operational requirements that relate to the prevention of fire or the procedures that are in place in the event of a fire.

The existence and location of the FPP is notified to all staff and will be readily accessible, in both hard and electronic copy, at all times, including during an incident. The plan and associated emergency contacts and site plan are stored in the site weighbridge/office (Emergency Pack).

All visitors and contractors to the site will be given a Site Induction and a copy of the Site Rules which they will sign to confirm their understanding. The Site Induction will ensure that visitors and contractors know what they must do to prevent a fire occurring and what to do during a fire if one breaks out. The location of the Emergency Pack will also be confirmed.

### 5.1 Training

All staff will be trained on the contents and requirements of the FPP (suitable to their role) and site inductions will include a summary of the FPP and notices of its location. A record of any training including any refresher or Toolbox talk will be recorded and signed off by all staff.

All staff are provided with information and training on fire prevention, protection requirements and action to be taken in the event of fire.

The Operations Manager is responsible for the implementation of training on site and this FPP.

New members of staff are given information or training on:

- Procedures and their personal responsibilities to prevent and protect against outbreaks of fire.
- What action to take if they discover a fire;
- How to raise the alarm, the location of manual call points, and the procedure for contacting the Fire and Rescue Service and the EA
- What action to take immediately on hearing the fire alarm;
- The location and safe use of portable or other fire extinguishing equipment;
- The location of escape routes from their place of work including those routes not used regularly for normal access and egress;
- Their responsibility to direct or escort visitors and contractors in their charge to escape routes (and in the case of disabled persons to the nearest useable escape route or refuge);
- The importance of keeping closed all fire doors to limit the spread of fire, heat or smoke;
- How to safely isolate or shutdown plant or equipment, where appropriate;
- The importance of good housekeeping in preventing the outbreak of fire and limiting its effects.
- Fire safety and emergency information for visitors and contractors will be provided at reception where they are required to sign-in.

### 5.2 Document Testing and Review

The company will carry out quarterly exercises to test how well the fire prevention plan works.

Exercises will be planned to test specific aspects of the fire prevention plan throughout the year to ensure effectiveness.

Such tests may take the form of physical drills or desk-based assessments as relevant to the element of this FPP that is

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under test. The nature of each test, the results, and appropriate actions (including where no action is required) will be maintained for inspection by the EA, on request.

The Operations Manager is responsible for the implementation of the testing of the FPP.

This fire prevention plan will be kept under regular review with monthly external audits conducted on fire prevention measures on site and review of compliance with this document.

This document will be revised where necessary, for example if:

- there is reason to suspect it no longer meets the objectives of the guidance
- the site has had a fire or identify a near miss of a fire
- changes in site activities
- the environment the site operates in changes, for example if a school or residential development is built nearby
- The EA ask the company to revise it due to some concern over the risk posed by site operations

Any revised document will be sent to the EA for approval prior to changes taking place.

## 6.0 Site Background

The facility is located on land located at SAR Metals Ltd, 3 Manby Road, South Killingholme, Immingham, DN40 3DX.

The site is made up of a large industrial factory building to be split into separate waste activities by activity sector with one additional external building located within the footprint of the site.

Activities carried out on site include:

- sorting, separation and bulking up of ferrous and non-ferrous metals by hand or plant
- treatment of WEEE (ATF)
- bulking and segregation of waste batteries (no treatment),
- recovery and treatment of catalytic converters

All treatment processes facilitate bulking and recovery of waste enable efficient onward transport, and to generate the metal grades required for further recovery or reuse within industrial processes (manufacturing) or for export.

The site has previously been used as a manufacturing and engineering facility, with SAR rebuilding and updating buildings to ensure integrity, installing critical infrastructure such as concrete storage bays, CCTV, fire detection improving to ensure environmental protection.

### Operational Hours

The site operates according to the hours stated below:

There are no waste operations carried out during unsociable hours that could impact the local environ or receptors.

The site operates according to the hours stated below:

- Monday to Friday 07:00 – 00:00 hrs
- Saturday 07:00 – 17:00 hrs
- Sunday/Bank/Public Holiday Closed

Vehicle deliveries would only be between 8am to 8pm and only internal works past this will not impact any sensitive receptors. It is not expected that any vehicles will be on site past 18:00hrs unless there are contractor/waste contractor delays.

Table 1 below provides information regarding the surrounding site environment.

**Table 1 – Site Setting**

| Direction | Use              |
|-----------|------------------|
| North     | Road Link        |
| South     | Industrial       |
| East      | Road Link        |
| West      | Rural (Woodland) |

The location of the site is shown in Image 1 below.

**Image 1 – Site Setting**



### Site Location and Receptors

FPP guidance states that consideration must be given to sensitive receptors such as:

- schools, hospitals, nursing and care homes, residential areas, workplaces
- protected habitats, watercourses, groundwater, boreholes, wells and springs supplying water for human consumption
- roads, railways, bus stations, pylons (on or immediately adjacent to the site only), utilities, airport

Receptors within 1km have been highlighted in Table 2 below.

**Table 2 – Site Receptors**

| Receptor                                     | Distance | Contact                       |
|----------------------------------------------|----------|-------------------------------|
| A1173                                        | 50m      | Highways Agency 0300 123 5000 |
| Woodland (Deciduous Woodland)<br>Chalk River | 50m      | Natural England 0300 060 3900 |
| Protected Habitats (Water Course)            | 500m     | Natural England 0300 060 3900 |
| Oxbow Uk                                     | 1km      | 01469 577635                  |
| Immington West Fire station                  | 488m     | 01482 565333                  |
| Humber Refinery                              | 155m     | 01469573186                   |
| The Canon Peter Hall CofE Primary School     | 730m     | 01469510300                   |
| Aldi                                         | 700m     | 08000420800                   |

## 7.0 Managing Common Causes of Fire

### 7.1 Control of Potential Causes of Fire

The following table (Table 3) identifies common causes of fire and the measures that SAR take to reduce the risk.

| Table 3: Control of Potential Causes of Fire |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Source of Fire                               | Applicability to Site and Proposed Management Controls                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Residual Risk |
| Arson                                        | <p>Arson by intruders is controlled via 24/7 CCTV, security fencing, and site security personnel (including external monitoring of CCTV out of hours).</p> <p>Access to the site directly from the A1197 is controlled via security gating.</p> <p>Any fire would be immediately identified by the site's visual inspection programme and fire detection equipment.</p> <p>The site office has a screen with a live feed of site CCTV.</p> <p>Perimeter inspection is undertaken on a daily basis and any repairs temporarily made good by the end of the working day. Arrangements are made to have permanent repairs, if required, completed within one week. Any defects and repairs are recorded.</p> <p>The site offices, the main building and the workshop buildings have intruder detection sensors fitted.</p> <p>During operating hours there is a member of senior management or staff on site at all times.</p> <p>Site offices and welfare areas have fire alarms. These are checked and maintained on a 6monthly basis.</p> <p>The site boundary is secured by palisade fencing (northern boundary)</p> <p>Half an hour prior to site closure a fire watch is conducted on all waste storage areas and plant by the Operator or nominated member of staff.</p> | VERY LOW      |

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|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Plant and Equipment | <p>The site has a regular inspection and maintenance programme which identifies any electrical or mechanical machinery faults which could result in a machinery fire.</p> <p>Mobile machinery will always be parked in the dedicated mobile plant storage area. This is located at least 10 m from the storage area which limits the potential for fire spread from machinery to material.</p> <p>All machinery is visually inspected as per the site Planned Preventative Maintenance program.</p> <p>Machinery is regularly cleaned to remove any dust, waste etc</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | VERY LOW |
| Batteries           | <p>Batteries are placed in purpose battery sealed storage boxes and kept in the designated battery storage building located away from the combustible waste storage area.</p> <p>Batteries will be stored by type or removed from WEEE waste, sorted and segregated with concrete bays walls to act as separation distance to reduce the risk of incompatible materials causing a fire risk.</p> <p>Once segregated batteries are stored in acid proof containers, under cover in a dedicated storage area, with an impermeable surface with a sealed drainage system.</p> <p>If received in error, they are returned immediately to the carrier, or if left on site they are quarantined. They will be stored in a designated area away from buildings and other combustible materials.</p> <p>If found to be damaged, they will be placed in a storage container that will be waterproof, covered and filled with sand located over 6m from all other batteries.</p> <p>These batteries will be removed to a suitable authorised facility for disposal within 5 days.</p> | LOW      |

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|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Plant and Equipment                                                       | <p>Plant and equipment are maintained in accordance with the manufacturer's recommendations and recorded on daily check sheets.</p> <p>Plant, fixed plant and equipment are operated in accordance with the manufacturer's instruction manuals.</p> <p>Induction training and refresher training is provided, to all persons engaged at the site, in the safe operation of plant and equipment relevant to their role.</p> <p>Inspection of plant and equipment is undertaken on a daily basis to check for faults and ensure appropriate safeguards are in place.</p> <p>Designated forms for the checking and defect records for all vehicles and plant are completed and forwarded to the Operator for checking and review.</p> <p>Regular cleaning is conducted on all operation plant. This is recorded when completed on plant inspection forms.</p> <p>At the end of the working day, plant and equipment are stored 6m away from stockpiles of combustible materials.</p> <p>In the event of a failure or suspected fault with an item of plant or piece of equipment, the relevant persons ensure that the equipment is shut-off in a safe manner and not used until the equipment can be repaired or replaced. Defects are reported to senior site management for appropriate action to be taken.</p> <p>All mobile plant is fitted with 2kg dry powder fire extinguishers for fighting vehicle, fixed and mobile equipment fires, so that trained staff can use to extinguish a small fire if safe to do so.</p> |          |
| Electrical Faults<br>Including Damaged or<br>Exposed Electrical<br>Cables | <p>The risk of damaged or exposed electrical cables is controlled via the regular inspection and maintenance programme.</p> <p>Any electrics on site are fully certified by a qualified electrician.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | VERY LOW |
| Discarded<br>Smoking Materials                                            | <p>Staff and visitors are only permitted to smoke within the designated area.</p> <p>There is no smoking permitted within the building where waste is stored or handled.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | VERY LOW |

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|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Hot Works                            | <p>No hot works will be carried out on site without a permit to work being issued and site management being made aware of the work. The hot works will be located at a safe distance from combustible materials. The activity will be very closely managed and with the presence of a fire watchmen.</p> <p>A fire watch will be conducted at the scene of any hot work for at least one hour after hot work has finished as sparks from hot works can smoulder for a significant time period.</p>                                                                                                                                                                                                                            | VERY LOW |
| Industrial Heaters                   | No industrial heaters will be used on site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N/A      |
| Hot Exhausts                         | <p>The site has a regular inspection and maintenance programme which identifies any signs of a fire caused by dust settling on any hot exhausts and engine parts. This is carried out via visual checks throughout the day as well as at the end of the working shift.</p> <p>All inspections are carried out daily as per SAR – F001 Dily Site Inspection.</p> <p>Machinery is regularly cleaned to remove any dust, waste etc to ensure that this does not accumulate on moving parts.</p>                                                                                                                                                                                                                                  | VERY LOW |
| Ignition Sources                     | Any ignition sources on site will be kept at least 6 metres away from the stored waste on site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | N/A      |
| Leaks and Spillages of Oil and Fuels | <p>The prevention of fuels and oil leaking out from site vehicles will be achieved by the regular inspection and maintenance programme. If there are any leaks, the regular inspections allow this to be dealt with straight away.</p> <p>The programme will specifically ensure that all site vehicles and mobile plant are maintained to an appropriate standard to prevent fuels and combustible liquids leaking or being tracked around the site. Any identified faults will be recorded and repaired by a fully certified mechanic.</p> <p>Spill kits will be provided throughout the site. All staff will be trained on how to use the spill kit as well as the procedures to carry out in the event of a spillage.</p> | VERY LOW |

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|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Build-up of Loose Combustible Waste and Dust | <p>The site has a regular inspection and maintenance programme which will identify any buildup of wastes and dust.</p> <p>This programme will specifically ensure that all areas of the site are maintained to a sufficient level of cleanliness and housekeeping to ensure that the plant does not present a fire risk. This programme will aim to keep levels of dust, loose fibre and any other combustible materials to a minimum.</p> <p>Machinery is regularly cleaned to remove any dust, waste etc to ensure that it does not accumulate on moving parts. The site is inspected at least twice a day in accordance with the site's inspection procedure.. Any buildup of waste and dust would be identified during the inspection.</p> <p>If any dust, waste etc was identified then the area would be immediately cleaned (swept, dampened down, blown down etc).</p> <p>Additionally, at the end of every shift the site is cleaned.</p> <p>All inspections are logged onto the Site Daily Inspection Form. All forms are stored in the site office.</p> | VERY LOW |
| Reactions Between Wastes                     | <p>All waste is accepted on site in accordance with the Waste Acceptance Procedures. This ensures that no incompatible or unstable wastes will be accepted on site.</p> <p>In the unlikely event of incompatible wastes being accepted on site, wastes will be transferred to the quarantine area before removal off site.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | VERY LOW |
| Hot Loads                                    | <p>Waste Knot Energy does not receive hot loads.</p> <p>On arrival, checks are made to ensure that no hot loads or smouldering materials are accepted by the site.</p> <p>The quarantine area (fire prevention) will be used in the event that any hot load is received, in error, by the site.</p> <p>Appropriate action will be taken, either the Fire Service contacted, or the waste will be allowed to cool, or the suppression system will be activated or a fire extinguisher used to dose a small fire or smouldering if safe to do so.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | N/A      |

## 8.0 Prevent Self-Combustion

### 8.1 Manage storage time

Robust stock pre-acceptance, acceptance, tracking, and management systems are in place such that no delivery is accepted at the site that would result in an exceedance of the permitted storage and/or processing capacity.

As deliveries are planned and organised by the Management Team, it enables the site to ensure that there is sufficient storage capacity available and to comply with stockpile capacities.

### 8.2 Managing Storage Time

#### Waste Storage

All incoming vehicles will be directed to offload their accepted waste into the relevant reception hall of each activity building.

#### General Management

SAR Metals Ltd will track all material flow through the site to ensure that the storage times specified in this plan are adhered to. Due to the incoming waste being stored in separate designated locations per load it ensures that all material is processed through the site on a 'first in – first out' principle.

The Operations Manager along with the contracts team will be responsible for daily management of incoming and the rotation of waste.

For all incoming waste, is recorded on the site waste tracking system and uploaded to the company IT system.

Waste is proposed to be handled, stored and treated in specific dedicated areas or buildings.

#### **Building Activities**

Building 1 – Data wiping services and WEEE storage

Building 2 – Catalytic Converter Recycling

Building 3 – Battery and Non Ferrous Metals

Building 4 – WEEE storage and treatment

Building 5 – WEEE Storage (overflow) and Shredding (TBC)

#### **External Storage**

Clean and uncontaminated metals only may be accepted and stored externally in stockpiles (plate and girder/aluminium (no cutting fluids/swarf).

Externally a shipping container is in place to bulk store batteries awaiting export.

3 containers are in place externally to store waste created on site and clean metals from the recycling processes on site (ferrous metals).

### 8.2.1 Monitor and Control Temperature

Due to combustible waste being stored within dedicated storage areas or buildings, for acceptance and treatment if required, turning stockpiles/waste in bays/containers is not considered necessary unless extreme temperature or prolonged warm temperature events occur.

The majority of the storage of waste is internal, thereby negating any risk of heating from hot weather and sunlight.

All of the above measures meet the minimum expectations defined with the EA Fire Prevention Plan Guidance.

#### Routine Daily Monitoring

During the day waste piles are visually monitored during the acceptance procedure and as part of the daily checks by site staff. Stockpile management is listed within the Daily Check sheet with all stockpiles checked to ensure compliance with the stockpiles detailed within this document (Inspection Forms).

Site staff are trained to detect signs of fire and hotspots, with the management of any signs of fire or hotspots carried out under the direction of the Operator.

Staff are to be vigilant for any signs of visual smoke or smouldering of wastes during the working day and should notify the Operator should they detect signs of fire.

Daily weather conditions and temperatures are recorded by the Operator or Nominated Person daily. This is recorded on the Daily Check Sheet. In the event there is a prolonged period of warm weather, additional weather inspections will increase in frequency, every two hours, to ensure the constant monitoring of all stockpiles.

#### End of Day Monitoring

At the end of each working day a fire watch is conducted on the stockpiles, waste stored in containers and site plant and equipment. This is carried out 30 minutes prior to the end of the working day. Nominated staff will look for any evidence of smoke, heat or smouldering.

Should this be detected, the stockpile or container will be assessed by the Operator whether to maintain visual monitoring or if the waste requires active fire measures such as water suppression. The use of fire extinguishers or water suppression would be implemented, or wastes can be placed into the designated fire quarantine area and separated to allow cooling. These checks are recorded and filed in the site office.

In the event of a fire, if safe to do so, the waste can be broken into, segregated to reduce the fuel source. Unburnt material can be placed in the quarantine area for the purpose of separation.

These end of day checks are recorded. These checks cover a site walk around and site closure measures including waste storage area checks, plant and equipment storage, security measures and the shut off, of electrical equipment.

#### Bank Holidays/Site Closure

During periods when the site will be closed over bank holiday/holiday periods the site will still be monitored via CCTV by the security team on a daily basis. This is to ensure that site is secure and to carry out monitoring and fire watch checks on existing stockpiles.

A guard will attend site and notify SAR Management if anything requires attention.

Security monitoring by the director (or nominated personnel) is also in place during these periods as they have access to site CCTV via their mobile phones.

Any security issues or incidents are reported inline with the SAR non-conformance reporting and recording system.

### Reduce the exposed metal content and proportion of 'fines'

No fines are produced on site.

Shredding activities are proposed to residual WEEE waste (eg: casings) once treated; waste will be in Building 5 awaiting shredding within the dedicated preprocessing area. Following visual inspection, the waste will be processed typically within the day.

Shredding is undertaken to reduce size to further recovery and aid separation of metals/plastic or glass. No more than 4-5 tonnes per day is proposed for shredding activities. This low volume reduces the risk of fire occurring.

To allow any heat generated post shredding to be released, the waste is allowed to cool for 1 hour with checks made to identify any heat, smouldering prior to entering the further sorting process.

### Dealing with hot weather, heating from sunlight and monitoring temperature

During periods of warm weather, care will be taken to ensure waste does not increase in temperature resulting in combustion.

During periods of prolonged warm weather care will be taken to monitor external and internal waste every two hours to ensure these wastes do not increase in temperature resulting in combustion. This is monitored by the assessment of daily weather conditions.

Where the ambient temperature is recorded above 24 degrees the site will trigger the implementation of a 2hour formal recorded visual check of all waste storage areas. The site supervisor or nominated person are responsible for weather monitoring and stockpile checks.

Wastes stored in bays and containers can always be accessed to enable site plant to move waste to cooler/shaded areas if required.

Using the grab, bulk metal waste should be broken into, and the waste spread and aerated. Visual inspection of the waste should continue. Once cooled the waste should be turned and returned into the designated storage location.

This would be actioned in response to daily weather monitoring and visual daily inspections of waste by the Operator (or trained nominated person).

Monitoring is conducted by the Operations Manager or a nominated trained member of staff. Any findings or responses to fire/smouldering are recorded in the site diary and made available in the site office for information.

### Contingency

In the event of any delay to the removal of material from the site, the Operator will contact the relevant 'waste receiver' to determine the anticipated length of the delay. If deliveries to the site are scheduled, before the delay to exports is resolved, that would result in an exceedance of the storage capacity, or if such a delay could cause a breach of the limits to the waste storage time on-site, the Operator will contact the EA immediately.

Wastes will not be stored in exceedance of the timescales specified in Table 4.

In addition, in the event of a contract failure with, or closure of, a waste receiver (and its operations) that could result in the storage of material on-site in exceedance of 3months, the Operator will contact the EA immediately.

In the event there is a major breakdown that effects site processing plant or equipment, the Operator take proactive action, consider ceasing waste acceptance and determine the anticipated length of the delay.

The EA will be notified of discussions between the site and the EA regarding actions and timescales in relation to the

recommencing of site operations.

## 9.0 Management of Waste Piles

### 9.1 Maximum Pile Sizes

Table 4 below details the current stockpile sizes, type and location of all waste stored on site.

**Table 4 – Stockpile Information**

| Location ref | Material type                                                                                                                        | Storage method                                               | Max dimensions (Length x Width x Height)       | Max duration on site | Control measures to reduce risk                                                                                        |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------|
| Building 1   | Incoming WEEE area post acceptance and quality check, requires data wiping pre WEEE treatment 9in B4)<br><br>Potentially Combustible | Container/bagged/ pallets                                    | 5m (l) x 5m (w) x 2(h) = 50m <sup>3</sup>      | 5 days               | 24/7 CCTV monitoring<br><br>Daily checks<br><br>Electric and manual logging system                                     |
| Building 2   | Incoming Catalytic Converters pretreatment<br><br>(Not combustible)                                                                  | Stockpile                                                    | N/A                                            | 7 days               | 24/7 CCTV monitoring<br><br>Daily checks<br><br>Electric and manual logging system                                     |
| Building 2   | Treated Catalytic Converters (RCF/Ceramic)<br><br>(Not combustible)                                                                  | Steel stillages / Bagged ceramic powder                      | N/A                                            | 3 months             | 24/7 CCTV monitoring<br><br>Daily checks<br><br>Electric and manual logging system                                     |
| Building 3   | Batteries<br><br>Combustible<br><br>Bays 1-9                                                                                         | Segregated batteries by type<br><br>Barrels/acid proof boxes | 8m (l) x 2.5m (w) x 1.5 (h) = 30m <sup>3</sup> | 3 months             | 24/7 CCTV monitoring<br><br>Concrete fire bays installed<br><br>Daily checks<br><br>Electric and manual logging system |
| Building 4   | Incoming WEEE area or non ferrous                                                                                                    | Bay 1- 5                                                     | 5m (l) x 5m (w) x 2(h) = 50m <sup>3</sup>      | 14days               | 24/7 CCTV                                                                                                              |

## Fire Prevention Plan

|                                                                                                                                                                       |                                                                                                                                                               |                                                                    |                                               |          |                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------|----------|------------------------------------------------------------------------------------|
| No WEEE wastes are formally allocated to an individual bay, bays are kept flexible for segregated battery types dependent on contract or variability of waste streams | metals/cable<br><br>Potentially Combustible                                                                                                                   | Three sided concreted bays                                         |                                               |          | monitoring<br><br>Daily checks<br><br>Electric and manual logging system           |
| Building 4                                                                                                                                                            | Segregated WEEE area<br><br>Various WEEE waste streams treated awaiting removal plastics/circuit boards/cable/metal<br><br>Potentially Combustible            | Bulk storage (awaiting export)<br><br>Bagged/Containers/palletised | 17m (l) x 7m (w) x 2(h) = 238m <sup>3</sup>   | 3 months | 24/7 CCTV monitoring<br><br>Daily checks<br><br>Electric and manual logging system |
| Building 5                                                                                                                                                            | Treated WEEE area for shredding                                                                                                                               | Containers/boxes/crates/IBCs                                       | 3m (l) x 3m (w) x 1(h) = 9m <sup>3</sup>      | 5 days   | 24/7 CCTV monitoring<br><br>Daily checks<br><br>Electric and manual logging system |
| Building 5                                                                                                                                                            | Segregated WEEE area storage or non ferrous metals/cable<br><br>Various WEEE waste streams plastics/circuit boards/cable/metal<br><br>Potentially Combustible | Containers/boxes/crates/IBCs                                       | 11m (l) x 5m (w) x 2(h) = 110m <sup>3</sup>   | 3 months | 24/7 CCTV monitoring<br><br>Daily checks<br><br>Electric and manual logging system |
| External Area<br><br>Yard<br><br>S1 – S4                                                                                                                              | Clean and uncontaminated scrap metal<br><br>(Not combustible)                                                                                                 | Stockpile<br><br>Loose                                             | 20m (l) x 10m (w) x 4 (h) = 800m <sup>3</sup> | 3 months | 24/7 CCTV monitoring<br><br>Daily checks<br><br>Electric and manual logging system |

All waste is stored under EA stockpile limits guidance and stockpile sizes.

## 9.2 Stock Rotation

To achieve good stock rotation and ensure the implementation of the “first in-first out” principle.

Waste is tracked electronically to monitor and plan input and output requirements for export to ensure throughput and capacity is always managed.

When bays or containers (metal / general waste) has reached its capacity signage is in places, so the correct wastes are taken from site to ensure the “first in-first out” principle (See example image below) and waste containment does not exceed capacity.

**Image 2 – Example of signage**



### 9.1 Storing waste materials in their largest form

WEEE waste may be subject to dismantling into separate waste streams for onward recovery. These wastes are stored separately once separated and treated into separate components for recovery.

Catalytic converters are subject to treatment in a dedicated building and reduced in size as part of the decanning process.

No treatment to waste batteries is undertaken.

Nonferrous metals may be subject to size reduction (hand cutting) for ease of recovery however these are not a combustible waste.

No treatment to bulk metals is undertaken.

Shredding is proposed for WEEE waste to reduce size for further treatment and recovery.

### 9.2 Waste Bale Storage

Waste is not baled or stored in bales on site.

### 9.3 Compost Production

No composting activities are undertaken on site.

### 9.4 ELVs

Are not received or stored on site.

## 10.0 Where Maximum Pile Sizes Do Not Apply

### 10.1 Containers

FPP guidance states that sites storing waste in containers that can hold more than 1,100 litres, must be accessible so any fire inside it can be put out. In the event of a fire, these containers must be moved as soon as is reasonably practicable to prevent the fire spreading. Access to all containers (storing wastes on-site) and containers will be maintained at all times to allow for the extinguishing of any fire within a container or for its removal to the quarantine area (fire prevention) as soon as is reasonably practicable.

There will be three bulk containers placed around the site for metal and general wastes created on site. Containers are accessible with operatives able to walk around the perimeter to inspect and check each container.

A bulk shipping container is in place along the eastern boundary of the site. This container is checked daily for integrity and visual inspection of the stability of stored wastes (heat/vapor).

In the event of a fire the use of onsite water suppression or fire extinguisher can be directed into the containers or pulled away using the forklift/grab to isolate it into the fire quarantine area.

The containers on site are measured at approximately 12ft (3.66m) Long x 6ft (1.83m) Wide x 4.5ft (1.37m) High.

The proposed storage retention timescales for each container is shown below in Table 5.

**Table 5 – Container Storage**

| Waste Type and storage method                      | Aim                                            | Maximum Storage Time |
|----------------------------------------------------|------------------------------------------------|----------------------|
| General waste (container)                          | 1 month                                        | 3 months             |
| Quarantined waste (non-fire damaged) in Building 4 | 5 days (pending recovery site and any testing) | N/A                  |
| Batteries (Shipping Container)                     | 1 month                                        | 3 months             |
| Metals (non-combustible)                           | 1 month                                        | 3 months             |

### 10.2 Moving containers in a fire

Access to the container storing wastes on-site will be maintained at all times to allow for the extinguishing of any fire within a container or for its removal to the quarantine area (fire prevention) as soon as is reasonably practicable.

General waste is stored, with a 6m separation from all other wastes and site plant. The container is accessible with operatives able to walk around the perimeter to inspect and check each container. The forklift/grab can be used to move the container if safe to do so.

In the event of a fire the use of onsite water suppression or fire extinguisher can be directed into the container or pulled away using site plant to isolate it into the quarantine area.

During working hours this should take 5 minutes.

## 11.0 Prevention of the Spread of Fire

### 11.1 Separation Distances

All plant machinery will be parked within the plant storage area at least 30m away from any combustible waste. A dedicated area is nominated externally for large operational plant (360 grab/loading shovels for bulk metal if required) stored on site.

Forklift/s are stored in Buildings 1,2 and 4 out of hours for access/handling of wastes in the event of an emergency.

### 11.2 Fire Walls, Bays, Buildings and Stockpiles

Below is a description of each building and its construction in relation to fire prevention and fire spread.

Building 1 – Data Wiping and WEEE data destruction prior to treatment - Breeze block walls, concrete surfacing, bunded sealed walls, 4 sided enclosed building with steel cladding.

Building 2 – Catalytic Converter Recycling – Breeze block walls, concrete surfacing, bunded sealed walls, 4 sided enclosed building with steel cladding and internal fireproof panel boards to enclose activities.

Building 3 – Battery and Non Ferrous Metals - Breeze block walls, concrete surfacing, bunded sealed walls, 4 sided enclosed building with steel cladding.

Building 4 – WEEE storage and treatment - Breeze block walls, concrete surfacing, bunded sealed walls, 4 sided enclosed building with steel cladding.

Building 5 – WEEE Storage - Breeze block walls, concrete surfacing, bunded sealed walls, 4 sided enclosed building with steel cladding and internal fireproof panel boards to enclose activities.

Externally clean and uncontaminated metals will be accepted and stored externally in 4 stockpiles with a 6m separation between each stockpile.

In Building 3 and 4 internal bays are made up of legio block concrete walls. The blocks are interlocked and have a fire resistance period of at least 120 minutes to allow the waste to be isolated preventing fire spread.

All storage of waste will be managed to ensure full stock rotation is achieved and waste processed through the site on a 'first in – first out' principle. The site management will be responsible for managing rotation of waste.

In addition, a stand offline is enforced at the front of each bay or storage area to prevent the over filing and overspill of waste which may result in fire spread. This is demarcated with a painted/marked line as a guide for site operatives.

A trained site operative will carry out a formal visual inspection daily, with constant visual inspection by trained staff throughout the day to ensure that bay discipline is maintained.

## 12.0 Quarantine Area

### 12.1 Quarantine Area Location and size

The quarantine area is somewhere burning wastes can be moved to extinguish them. It can also be used for the storage of unburnt wastes into the quarantine area to isolate and prevent them catching fire if necessary.

The quarantine areas (fire prevention) will be kept clear at all times located in the external yard and in Building 4.

This will be in the form of a dedicated areas which will be kept clear at all times.

#### **Building 4**

5m (l) x 5m (w) x 4 m(h) = 100m<sup>3</sup> with a concrete fire wall around the area.

#### **External Area**

15m (l) x 15m (w) x 4m (h) = 900 m<sup>3</sup> with a 6m buffer around the area.

Each quarantine area (fire prevention) is large enough to hold 50% of the largest stockpile.

### 12.2 How to use the quarantine area if there is a fire

The quarantine area is located within the permitted area as a designated areas and shown on the overall site plan at key points around the site.

#### 12.2.1 Procedure to remove material stored temporarily if there is a fire

If safe to do so, nominated trained staff can separate any smouldering or burning wastes using the forklift or grab.

During working hours this should take 5 minutes.

In the event of a fire, this could be tackled initially with water, until the Fire Service attend site. Under the direction of the Fire Service, a trained member of staff can use the grab/forklift to separate any non-burning wastes into the quarantine area, to reduce the risk of fire spread.

## 13.0 Detecting Fires

### 13.1 Detection systems in use

Identifying fires as quickly as possible makes the suppression of the fire easier and results in lesser damage to the environment and human health.

In addition to visual inspections throughout the day, the detection systems below are in place on site.

### 13.2 CCTV

Onsite CCTV cameras provide visual monitoring during operational hours and out of hours.

Cameras cover all operational areas on site and all waste storage locations.

Active site monitoring and out of hours detection is as detailed in section 7.1 can detect a fire in its early stages to reduce its impact.

The images are linked to the key nominated personnel mobile phones, to allow for early detection and notification of the fire service in case of alarm.

External security also monitors the site out of hours.

### 13.3 Fire Alarms

Fire alarms are installed in site offices and welfare areas. The alarm will detect smoke/fire within these locations and would audibly alert staff on site.

As previously detailed in Section 7.1, the fire alarms are also monitored 24/7 by nominated key holders (access via mobile phone) and an external Security company. The key holders will alert the fire service out of hours in the event a fire alarm is activated including external security support.

Abatis Fire & Security Ltd  
Abatis House  
194-196 Victoria Street  
GRIMSBY  
DN31 1NX

Telephone 01472 500836

The design, installation and maintenance of this detection system is covered by a UKAS-accredited third-party certification scheme.

The system design is intended to conform to PD6662: 2017, which is the UK implementation of EN 50131, BS 8243 and NSI Codes of Practice.

Buildings have the below detection and fire door features.

#### Building 1

3 x Personnel/Fire Doors  
2 x Roller Shutter Door

## Fire Prevention Plan

4 x Dual Tec Detection

**Building 2**

1 x Personnel/Fire Doors  
1 x Roller Shutter Door  
2 x Dual Tec Detection

**Building 3**

1 x Personnel/Fire Doors  
2 x Roller Shutter Door  
2 x Dual Tec Detection

**Building 4/5**

6 x Personnel/Fire Doors  
Page 3 of 16  
12 x Roller Shutter Door (6 doors x 2 contacts)  
10 x Dual Tec Detection

**Dual Technology PIR & Microwave Detector specifications**

Device Combined PIR & Microwave Detector  
Detection To detect movement across a range of 90 degrees through 12 metres  
Programmed as Instant Alarm

**System Overview**

Installation and commission of a 2-wire analogue addressable fire alarm system to comply with BS5839-1.

Provided P2/M coverage to each of the Main Offices and Warehouses 1, 2, 3 & 4.

Electronic sounder units will be distributed throughout the building with the intention of achieving 60dBA throughout the protected area.

**SMOKE/FIRE PROTECTION**

Over the Main Building and the 4 Warehouses, the below will be installed following Sounder, VAD's, Detection & Manual Call Points (MCP's)

There are a total of

- 44 x Smoke/Heat Detectors
- 21 x MCP's
- 2 x Sounder Bases
- 10 x ESP FireBeam Extras
- 23 x Sounder/VAD's

MCP Protection is mounted at heights of approximately 1400mm.

**Call Out and Maintenance Service**

The company have contracted an external security service provider to provide call out service to maintain the security systems. This is available 365 days a year.

Whatever the time of day or night, the user can talk to an engineer and be assured of a prompt on site attendance should it be required.

Rapid response, decisive action and experienced engineers are behind every Abatis installation. Abatis systems

## Fire Prevention Plan

are manufactured to the highest standards and carry full warranty, but systems must be maintained by a specialist as required by British Standards.

Maintenance is provided for all installations. This offers a call out service, which guarantees a response not normally longer than 24 hours along with visits to clean and check the equipment as required.

### 13.4 Waste Storage Buildings

Within all buildings there are CCTV cameras installed for visual fire and smoke detection with intruder detection sensors fitted.

Drawing 005 details the locations and layout of the detection/extinguisher equipment on the plant.

### 13.5 Fire Alarm Tests and Drills

Tests and drills are an important mechanism to ensure that the site is prepared for a fire.

As such:

- Weekly fire alarm tests are carried out in the site offices;
- Fire drills take place six monthly to identify any weakness in the evacuation strategy on site; and
- Fire alarms are to be tested regularly in accordance with the manufacturer's recommendation.

## 14.0 Suppressing Fires

EA guidance states “If you store waste in a building, you must install a fire suppression system. This system should be proportionate to the nature and scale of waste management activities you carry out and the associated risks”.

Any detection system should be proportionate to the nature and scale of waste management activities carried out and the associated risks.

Appropriate automated systems may include:

- smoke and heat detectors including temperature probes
- CCTV visual flame detection systems
- spark, infrared and ultraviolet detection

### Handheld Fire Extinguishers

Handheld firefighting equipment is provided in the building and will also be provided within mobile plant.

A 9kg or 6kg powder extinguisher is placed in each building and external storage areas as shown on drawing 5.

All mobile plant is fitted with 2kg dry powder fire extinguishers for fighting vehicle/equipment fires.

All fire extinguisher locations and types are shown on site maps located in these areas, the site offices, fitters building, and staff welfare area.

### Mains Water Supply

The site is equipped with a mains water supply (Building 4) and a mains water connection is provided outside of the main workshop building.

The site is equipped with a standard 32mm mains water pipe supplying the site with mains water.

A dedicated firefighting hoses (100m) will be provided and maintained, allowing for water to be available and within reach of all waste storage locations in the event of a fire.

## 15.0 Firefighting techniques

The site must always have the resources available to fight a fire. These include:

- Plant to move waste around the site such as the forklift/grab;
- Nominated staff (on-call for out of hours events);
- Available water supply;
- Fire Extinguishers; and
- Finances for the removal of fire damaged waste or water and any remediation costs.

In the event of a fire at the site, the class of fire will determine the action to be taken by the fire authorities.

### 15.1 Site information

To assist the authorities in managing a fire outbreak at the site, a copy of this FPP should be provided to the authorities as possible including the site layout plan and quantities and types of stored materials.

A copy of this document will be provided to the Security Company, and a copy will be located outside of the office for the Emergency Services and site staff to access in an emergency.

### 15.2 Emergency Service Response

The local Fire and Rescue Service (Immingham West Fire Station, Rosper Road, Immingham, DN40 3DZ) will assume full control for the approach to suppression/extinguishing of any fire once it is in attendance at the site.

Attendance should take no more than 3 minutes (distance to site is 1.8miles).

### 15.3 Onsite firefighting equipment

Fire extinguishers are situated around the site in key locations, they are also located inside the buildings for easy access, and next to the fuel/liquid storage areas.

All firefighting equipment will be kept in good condition, unobstructed, and be serviced at least once a year by a competent person.

A hose is fitted to apply water to any stockpiles, to cool smouldering waste or cool unburned material near this area if safe to access in the event of a fire.

In addition, as discussed in Section 12 the quarantine area (fire prevention) will also be maintained and kept free of obstruction, to be used as either:

- An area for extinguishing burning materials;
- An area for the segregating of unburnt materials away from a fire

Upon identifying or being made aware of a fire, the Operations Manager will raise the alarm and alert all present on site to the fire and its location and alert emergency services.

## Fire Prevention Plan

The site will be evacuated in accordance with the site evacuation plan with the exception of those staff involved in active firefighting.

Staff will only tackle the fire using the fire extinguishers or move the waste if it is safe to do so.

In the unlikely event of a fire which has unsuccessfully been extinguished by the sites suppression system, staff are to await the Fire and rescue Service (FRS), who would then take the appropriate actions.

All personnel working on the site are provided training in the Fire Prevention Plan and all associated procedures and controls.

## 16.0 Water Supplies

The EA guidance for FPP requires that, for a 300m<sup>3</sup> stockpile, a total of 360,000 litres (360m<sup>3</sup>) of water would be required in order to extinguish the fire.

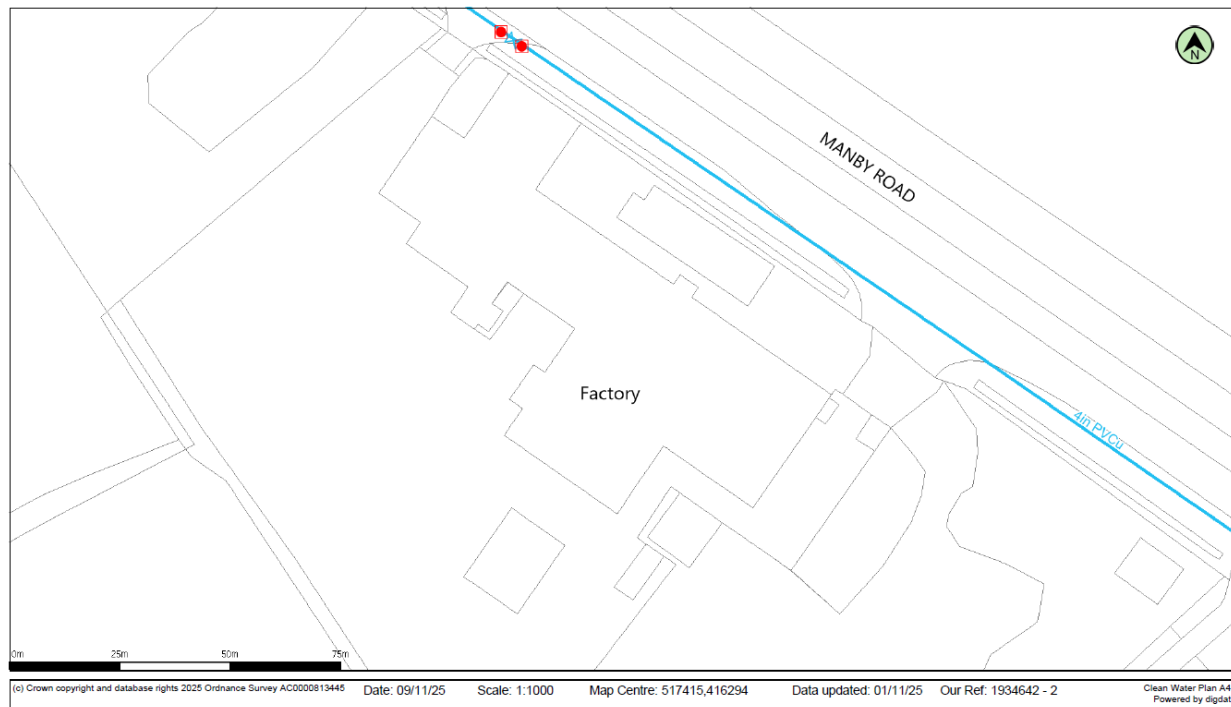
### 16.1 On and Off Site Supply

The table below provides a summary of the on-site firefighting water supplies, these are also shown below and on Drawing 006.

**Table 6 – Water Supply on site**

| Table 5 - Fire Water Supplies |                                                                                |                            |
|-------------------------------|--------------------------------------------------------------------------------|----------------------------|
| Description                   | Capacity / Flow                                                                | Location                   |
| Hydrant 1                     | 900 litres per minute<br>Connected to water main therefore supply is unlimited | Site Entrance 5m           |
| Hydrant 2                     | 900 litres per minute<br>Connected to water main therefore supply is unlimited | Site Exit 5 m              |
| Mains Water                   | N/A                                                                            | Building 4 x 1<br>Yard x 1 |

**Image 3 – Hydrant Locations**



The location of each hydrant and operational status have been confirmed by Anglian Water in November 2025.

## 16.2 Water supply required

Table 7 below details the largest stockpile on site and water supply required for a minimum of 3 hours.

Calculations shown below show evidence that there is sufficient water available to suppress the largest stockpile on site.

**Table 7 – Required water supplies**

| Maximum combustible pile volume in cubic metres | Water supply needed in litres per minute Pile volume x 6.67 | Overall water supply needed over 3 hours in Litres<br>Supply x 180 | Total water available on site in litres                       |
|-------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------|
| 238m <sup>3</sup>                               | 1587.46lts                                                  | 285,742.8lts                                                       | 360,000lts Hydrant x 2 = 720,000lts<br><br>Site supply (hose) |

The provision of the above water supply as well as the automatic detection is considered to satisfy BAT for site fire prevention.

## 17.0 Managing Fire Water

All internal areas of the site are fully concreted, providing an impermeable surface with sealed walls/bunding.

All buildings have been constructed with bunding in place. In the event of a fire, temporary bunds would be implemented to cover the doorways, thereby creating a complete bund and ensuring that all potentially contaminated firewater is retained within each building.

The external yard is made up predominantly of hard standing, with some areas of concrete and tarmac.

In the event of a fire, dammit mats will be used to cover the two drainage gulleys (septic tank) located in the yard and sandbags will be used to block the site entrance or exit to the industrial estate.

To retain water within the system on site, fire water containment will be managed by the use of hydrosnakes, which are firewater booms. These will be installed across the building entrances. Hydrosnakes are located in secure containers around the site. The firewater bunds which will take two members of staff approximately 10 minutes to implement. This will build a bund approximately 120mm high and each hydrosnake 1.45m each in length. Bunds can be increased in height depending on requirements or for stability of barriers.

Hydrosnakes are a highly effective flood / water prevention barrier. They can absorb up to 20 litres of water and expand up to 40x its own weight. Versatile design allows them to fit into openings and door wells. These are eco-friendly, easy to dispose of, pulp and super absorbent polymer. Simply slit the sack and disperse the contents into the earth. They are also suitable for landfill and incineration.

### Image 4 - Hydro snakes size and example of use



The hydrosnakes will divert and contain water within a building which can then be pumped out by an emergency drainage contractor.

In the event of a fire, all fire water would be contained onsite. Buildings and storage areas with calculated fire water containment areas shown below.

- Building 1 30m (w) x 24m (l) x 0.12m (h) = 86.4m<sup>3</sup> Water storage 86,400 lts
- Building 2 30m (w) x 17m (l) x 0.12m (h) = 61.2m<sup>3</sup> Water storage 61,200 lts
- Building 3 28m (w) x 18m (l) x 0.12m (h) = 60.4m<sup>3</sup> Water storage 60,400 lts
- Building 4 20m (w) x 52m (l) x 0.12m (h) = 124.8m<sup>3</sup> Water storage 124,800 lts
- External Area (Building 3) 12m (w) x 20m (l) x 0.12m (h) = 28.8m<sup>3</sup> Water storage 28,800 lts
- External Area (Yard) 56m (w) x 114m (l) x 0.12m (h) = 766.08m<sup>3</sup> Water storage 766,080 lts

## Fire Prevention Plan

A local wastewater contractor will provide emergency support for the removal of contaminated fire water retained within buildings, and all fire water will be removed via tanker for transfer offsite to an appropriate treatment facility.

Regular maintenance of building drainage features (guttering/pipework) and site surfacing are carried out by the Operator to ensure the effectiveness of the above system.

Please note, the detection and suppression system will rapidly detect and extinguish any fire within the buildings, therefore large volumes of fire water will not be required to be contained on site.

### Contamination to land and water courses

For areas on the site not benefiting from an impermeable surface it is important to assess the risk of fire water to these areas. In the event of fire pollution controls will be implemented to reduce the risk to these areas.

As part of the requirement of FPP guidance in the event of an incident the site would identify any areas/materials that may have been contaminated by fire water. The site would conduct an inspection and if required test and sample the area arranging for the removal of contaminated material off site and conduct any remediation work required.

Due to the location of the site, there are no surface waters such as rivers, estuaries, lakes, canals or coastal waters within approx. 1.5km of the site. There is an unnamed tributarys bordering the site. With the appropriate controls on site there should be no risk this water courses.

A check has been made on Magic Map ([MAGIC \(defra.gov.uk\)](https://magic.defra.gov.uk)) on the potential effect of fire water on:

- the local groundwater and surface water bodies
- any well, spring or borehole within 50m used for the supply of water for human consumption, including private water supplies.

There is no risk to the above receptors identified with appropriate site controls.

A check has been made on Magic Map ([MAGIC \(defra.gov.uk\)](https://magic.defra.gov.uk)) and in the Groundsure Report<sup>1</sup> on the potential effect of fire water on:

- **Groundwater Vulnerability**

The site is located in Groundwater Vulnerability classification - Medium – High

**High: areas that can easily transmit pollution to groundwater. They are characterised by high-leaching soils and the absence of low-permeability superficial deposits.**

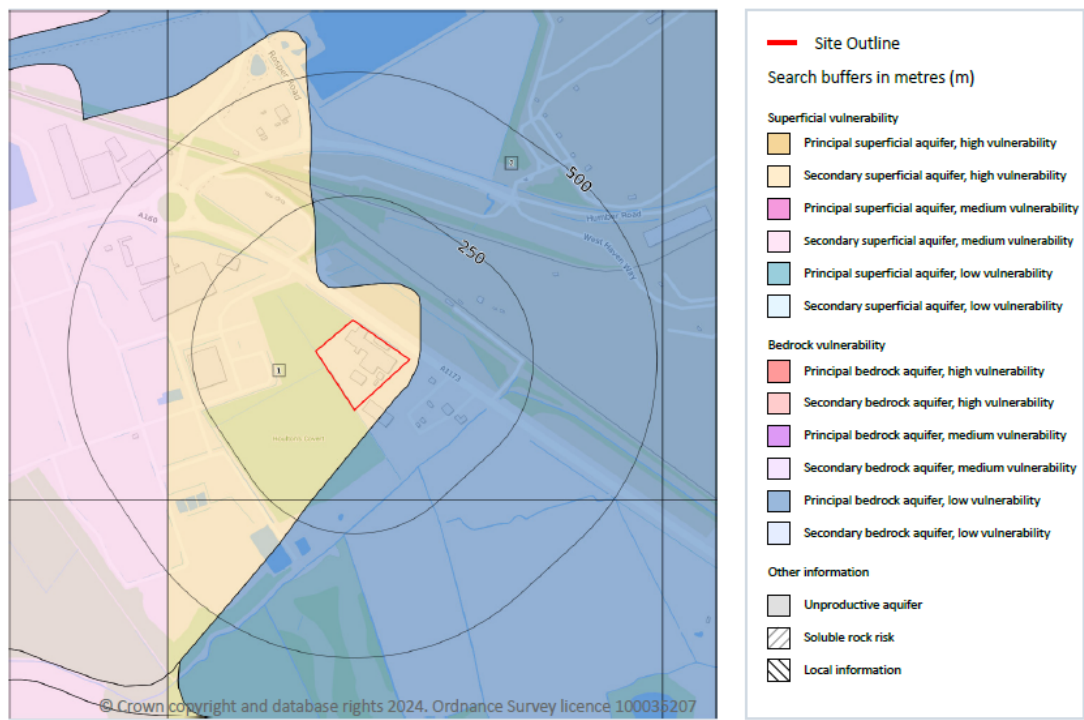
**Medium: areas that offer some groundwater protection. Intermediate between high and low vulnerability.**

Based on the low level of combustible waste stored externally (noncombustible metals and secure containerised waste ) there is a low risk to land and groundwater in the event of a fire.

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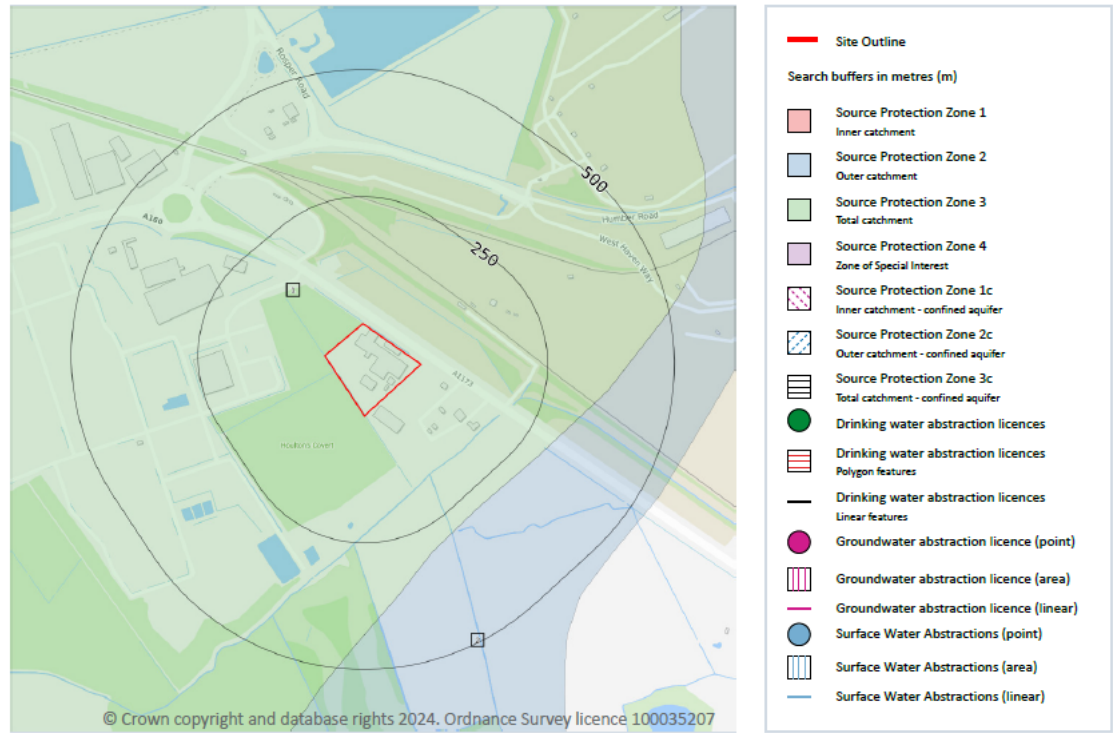
<sup>1</sup> GS-80V-UZ4-RUJ-V9G - Groundsure SAR  
OLIVE COMPLIANCE LTD

Image 5 - Groundwater Vulnerability Map (England)



Source Protection Zones merged (England) – 3

Image 6 - Source Protection Zones and Site Location



The site is in a Source Protection Zones merged (England) – 3.

## Fire Prevention Plan

Based on the low level of combustible waste stored externally (noncombustible metals and secure containerised waste ) there is a low risk to source protection zones in the event of a fire.

**Remediation to land**

In the event of fire should any fire water be released to external site surfaces not benefiting from concrete surfacing will be tested to identify any potential pollution and remediate accordingly and the site condition report updated.

**Training**

Sandbags, hydrosnakes, damit mats will be deployed by trained person/s nominated by the site management in and outside of working hours.

Full training, testing and a formal procedure will be produced in respect to this system.

**Remediation to equipment**

Each hydrosnakes measures up to 1.45m in length. They are safe and easy to dispose of; and environmentally friendly.

After use, the contents can be dispersed into a sealed container to allow for sampling to identify the suitable disposal route, if contaminated. sandbags are widely used for water redirection & pollution control.

As part of the monthly FPP checks, all fire control equipment will be checked for damage and integrity to ensure they are in good condition to provide effective pollution prevention.

Any damaged hydrosnakes will be replaced within 48hrs, with the waste hydrosanles/sandbags sent to a suitable permitted facility for recovery.

## 18.0 During and after an incident

The site has an Emergency Action Plan in place.

On the discovery or suspicion of a fire:

- Activate the nearest fire alarm;
- Initiate evacuation of staff and visitors on site to the muster point and instruct delegated person(s) to conduct a rollcall to ensure all site users are accounted for;
- If trained and safe to do so, attempt to tackle the fire using one of the site's fire extinguishers or segregate smouldering/burning waste;
- Apply fire water control measures (sandbags/hydrosnakes/damit mats) in the localised area where appropriate;
- Where attendance of the local Fire and Rescue Service is required, dial 999 to call the Fire Brigade;
- Contact customers and company drivers to cease any waste deliveries to site;
- Nominated staff member will implement the firewater bunding, to prevent the release of any potential fire water;
- The Operator (or other responsible person) will make an assessment of the prevailing wind direction, contacting the critical receptors shown on Drawing 004 dependent on the receptors that may be affected.
- Operator contacts the EA on 0800 80 70 60.

### 18.1 Active fire fighting

If it is safe to do so staff may try to suppress a small fire by using fire extinguishers, hose or by using manual site plant to segregate and separate burning waste.

Fire extinguishers are located and maintained at the fire action points around the site and within mobile plant.

Instruction signs on the use of extinguishers and suitability of each type of extinguisher are kept adjacent to the extinguishers.

### 18.2 Visitors/Staff

On hearing the fire alarm:

- Leave the site quickly and calmly via the site's or office's main entrance, closing all doors behind you.
- Report to the Operator/Fire Warden at the assembly point located outside of the main entrance;
- Do not take risks;
- Do not stop to collect personal belongings; and
- Do not re-enter the site for any reason unless authorised to do so.

Fire action notices are located and maintained at various points around the site to remind staff of the actions to be taken in the event of discovering a fire or hearing the fire alarm.

### 18.3 Receptors

Local receptors dependent on wind direction must be notified via telephone or verbally if staff are able to attend local businesses or properties listed in Section 6.

## 18.4 Deliveries to site

No waste acceptance will commence until the Senior Management Team, and the EA have cleared the site as operational.

## 18.5 Making the site operational after a fire

After a fire event, the following procedure will be implemented depending on the severity of the fire.

### 18.5.1 After a small fire

A fire dealt with in-house using suitably trained staff and firefighting equipment located on site is classed as a small fire.

The fire will be recorded in the site diary and an Incident Record produced which will include the causes of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented on-site will be incorporated with updates to this FPP, as required.

The incident and the results of the above assessment will be forwarded to the EA, with any updates to the FPP and the site's EMS are made if required.

### 18.5.2 After a large fire

A fire that requires the presence of the Fire and Rescue Service is classed as a large fire.

If the site has been told to evacuate or cease operations by the EA and/or Fire and Rescue Service, site management and staff will wait until instructed that it is safe to re-enter the site and resume operations. The fire will be recorded in the site daily check sheet and an Incident Record Form with details of the cause of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented on-site will be incorporated within updates to the FPP and the site's EMS as required.

Should damage be sufficient to prevent permitted operations at the site, the site will cease accepting waste, in accordance with the contingency planning provisions.

The Senior Management Team will liaise with the EA to determine a plan-of-action to recommence permitted operations at the site, and the timescales involved in achieving this.

## 18.6 Contaminated Fire Water

A wastewater contractor will provide emergency support for the removal of contaminated fire water. In the event contaminated water is to be removed offsite the company can provide an emergency response and remove any contaminated water to a suitably permitted disposal site.

## 18.7 Fire Damaged Waste

A visual assessment will be carried out by the Operations Manager to determine whether the waste can continue to be stored on-site. Wherever possible, unburnt waste will be separated from fire damaged waste. If waste has become mixed, then it is likely that the waste will be removed from the site for disposal.

Any damaged waste will aimed to be removed from the site within 24 - 48 hours to a suitably permitted facility (subject to testing and available facilities).

## Fire Prevention Plan

Any quarantined waste, waiting for removal from site, is stored in the quarantine area to prevent the contamination of unburnt wastes on-site.

## 19.0 Conclusion

This Fire Prevention Plan is considered to be a 'working' document that will be reviewed annually and updated as required should any of the following occur:

- a fire on site;
- the results of any testing of this FPP indicate that changes are required;
- a change or review of legislation; or
- if the site is instructed to do so by the EA.

It will be the responsibility of the Operator or nominated person to maintain this Fire Prevention Plan and to ensure it is adhered to both to limit the risk of a fire occurring on-site and in the event of a fire on-site.

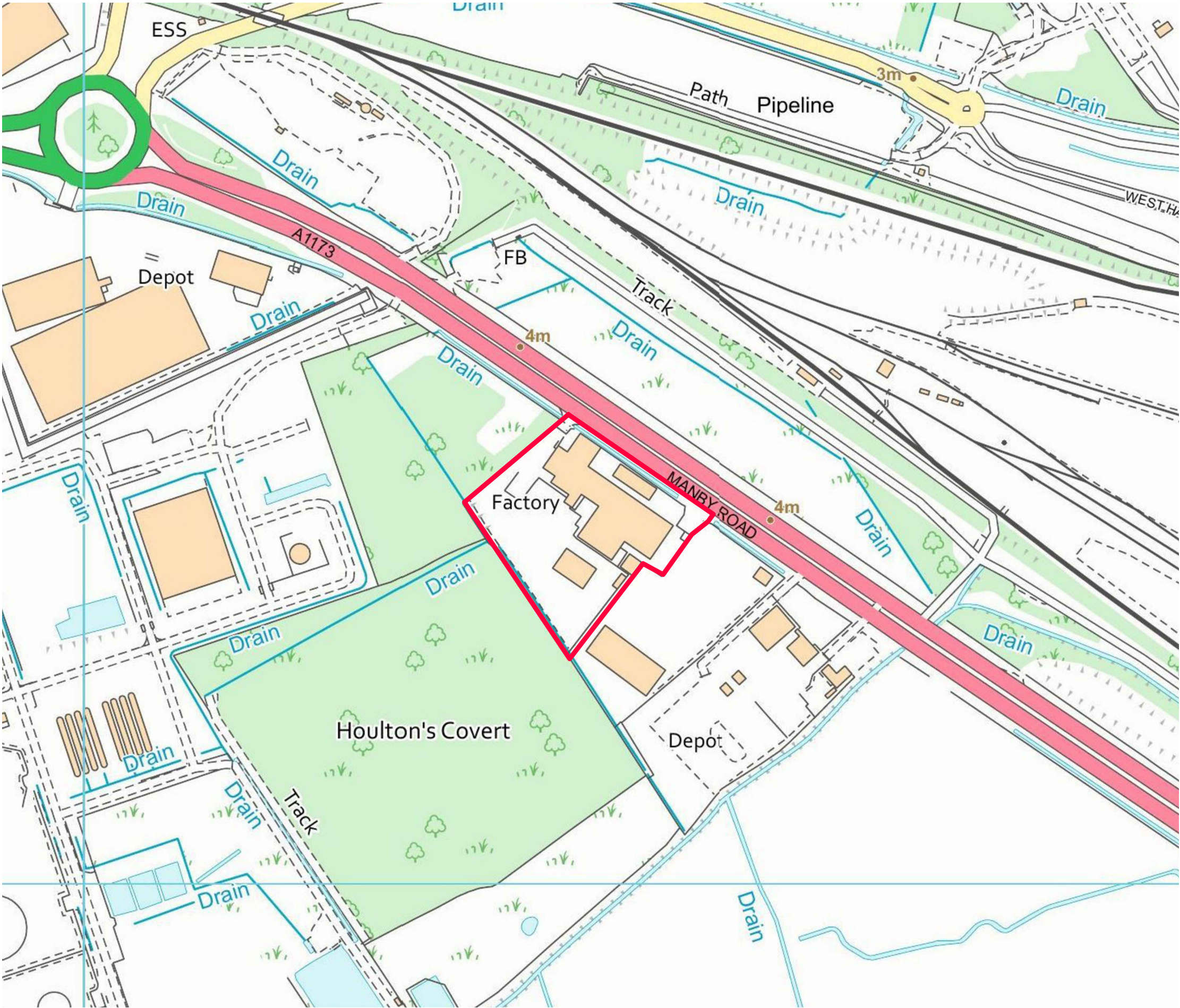
Any updates to this FPP, either as a result of specific incidents or identified during its testing/review, will be submitted to the EA for its approval prior to implementation of the proposed changes at the site.

## **APPENDICIES**

ANNEX A: SITE PLANS

ANNEX B: DETECTION AND SUPPRESSION INFORMATION

ANNEX C: RECEPTOR INFORMATION



NOTES

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LEGEND

THE SITE

N

W

E

S

SITE  
SAR

UNIT 3 MANBY ROAD SOUTH KILLINGHOLME IMMINGHAM DN40 3DX

PROJECT

EA Permit Application

DRAWING TITLE

LOCATION PLAN

DRAWING NUMBER

001

REVISION

0

SCALE

1:5000 @ A3

DATE

14.11.24

OLIVE

Compliance



NOTES

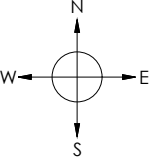
DRAWING IS A SITE SCHEMATIC

ANY ANOMALIES ON THIS DRAWING SHOULD BE BROUGHT TO THE ATTENTION OF OLIVE COMPLIANCE

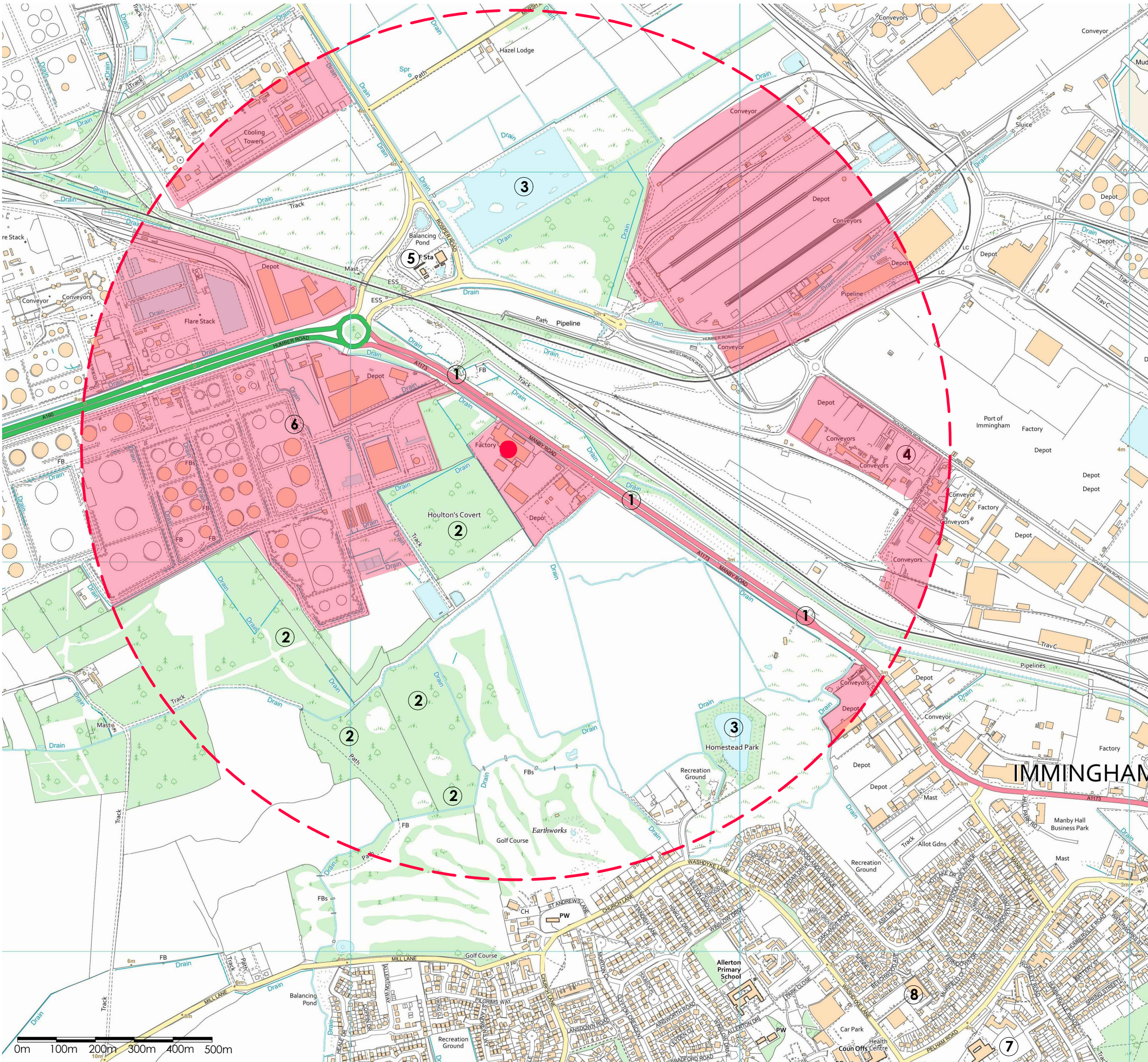
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LEGEND

 PERMIT BOUNDARY



|                                                                                       |                          |
|---------------------------------------------------------------------------------------|--------------------------|
| SITE<br>SAR<br>UNIT 3 MANBY ROAD SOUTH KILLINGHOLME IMMINGHAM DN40 3DX                |                          |
| PROJECT<br>EA Permit Application                                                      |                          |
| DRAWING TITLE<br>PERMITTED AREA PLAN                                                  |                          |
| DRAWING NUMBER<br>002                                                                 | REVISION<br>1 - 05.02.25 |
| SCALE<br>1:750 @ A3                                                                   | DATE<br>14.11.24         |
|  |                          |



NOTES

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LEGEND

SITE / SITE BOUNDARY

1KM OFF SET BOUNDARY

INDUSTRIAL / INDUSTRIAL PARK

1

A1173

2

WOODLAND (DECIDUOUS WOODLAND) CHALK RIVER

3

PROTECTED HABITATS (WATER COURSE)

4

OXBOW UK

5

IMMINGHAM WEST FIRE STATION

6

HUMBER REFINERY

7

THE CANON PETER HALL COFE PRIMARY SCHOOL

8

ALDI

South Killingholme Wind Statistics

February Wind

Leconfield Sst (20km)

2

4

6

8

10

12

14

16

18

20

22

24

26

Avg Max (February)

Avg (February)

2025

January

February

Strongest 2 February, 2025

11.2mph SSW

Average February

3mph

Wind Rose

Annual (5 Year Average)

20%

11.25%

2.5%

19.66% WSW

Calm

Gale

N

E

S

W

SITE

SAR METALS, RJA HOUSE

UNIT 3, MANBY ROAD, SOUTH KILLINGHOLME, IMMINGHAM, DN40 3DX

PROJECT

EA Permit Application

DRAWING TITLE

SITE RECEPTOR PLAN

DRAWING NUMBER

004

REVISION

0

SCALE

1:10000 @ A3

DATE

10.02.25

OLIVE

Compliance



Value  
Range



PPE &  
Safety



Facilities  
Management



Construction &  
Industry



Medical &  
First Aid



Transport &  
Automotive



Office &  
Equipment



Home &  
Living



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Pet Supplies



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### Fire Extinguishers - Volume

- [0.5 L](#)
- [1 L](#)
- [100 L](#)
- [2 L](#)
- [more](#)
- [3 L](#)
- [50 L](#)
- [6 L](#)
- [9 L](#)

### Fire Extinguishers - Capacity

- [1 kg](#)
- [10 kg](#)
- [100 kg](#)
- [12 kg](#)
- [more](#)
- [2 kg](#)
- [25 kg](#)
- [3 kg](#)
- [4 kg](#)
- [5 kg](#)
- [50 kg](#)

- [9 kg](#)
- [950 g](#)

Fire Class Rating

- [A - Flammable Solids](#)
- [B - Flammable Liquids](#)
- [C - Flammable Gases](#)
- [D - Flammable Metals](#)
- more
- [Electrical Fires](#)
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- [BS 6165 - BS Single Use Fire Extinguishers](#)
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- [BS EN 3 - Portable Fire Extinguishers](#)
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Detection Type

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Stand & Cabinets Suitable For

- [12 kg Extinguisher](#)
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- more
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## AUTOMATIC 10 Kg Powder Extinguisher - ABC Fires Rated - Fitted Pressure Gauge - [HS-APS10]

- Automatic 10 kg Powder Extinguisher
- Stored Pressure
- Includes fixing brackets
- Suitable for A,B,&C Class fires
- Fitted with pressure gauge for easy routine checking
- 68C red bulb included
- Ideal for use in enclosed areas ie engine/plant/switch rooms

This product is suitable for A,B&C class fires which include those caused by wood, paper, cloth, trash and ordinary materials (A), those caused by gasoline, oil, paint, and other flammable liquids (B), and fires involving live electrical equipment without exposing the operator to danger (C).

**Dimensions:**

- Overall height: 312mm
- Cylinder Diameter: 270mm
- Overall width (inc hose): 270mm
- Filled weight: 13.34kg

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3L

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1kg

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**12 Kg**

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Fire Extinguisher Sign - 300 X 100Hmm - Rigid Plastic - [AS-FI0-RP]

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Fire Extinguisher Sign - 300 X 100Hmm - Self Adhesive Vinyl - [AS-FI0-SAV]

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**IN CONFIDENCE**

**PROPOSAL FOR THE UPGRADE AND RENEWAL OF:**

**INTRUDER ALARM SYSTEM  
FIRE ALARM SYSTEM**

**To:**

Attention: Paul Smith

**SAR Metals**

**In connection with:**

Unit 3, Manby Road,  
Immingham,  
North East Lincolnshire  
DN40 3DX

**PREPARED BY**

Chris Stephenson

**Abatis Fire & Security Ltd.**

Abatis House  
194-196 Victoria Street  
GRIMSBY  
DN31 1NX

Telephone 01472 500836

[chris@abatis.co.uk](mailto:chris@abatis.co.uk)

[www.abatis.co.uk](http://www.abatis.co.uk)

**Specification Date: September 2024 (revision to Include Warehouse 4)**

**Survey Date: July 24**

### **System statement**

This system design is intended to conform to **PD6662: 2017**, which is the UK implementation of **EN 50131, BS 8243 and NSI Codes Of Practice**. The system is capable of generating **sequentially confirmed alarms**, for the purpose of obtaining **Policed response** although this has not been proposed as part of this specification.

### **Grading of Intruder and Hold Up Alarm Systems**

In accordance with the European standards now in force, a desktop survey and risk assessment of the property was carried out by Chris Stephenson of Abatis Fire & Security Ltd based on drawing tender document files provided. The risk assessment relates to the grading and design of the proposed intruder alarm and is based on the information available at the time of survey; including the customers own specific requests and those made by the customers' insurance company where applicable.

**This system is designed to provide a Grade 2 with notification options 2.**

**It is the customers' responsibility to ensure that this system is acceptable to your building and contents insurers.**

After completion of the installation and following receipt of payment, a National Security Inspectorate "Certificate of Compliance" will be issued.

### **Detection Schedule**

#### **Main Offices:**

Existing Detection Schedule to be retained

#### **Warehouse 1**

3 x Personnel/Fire Doors  
2 x Roller Shutter Door  
4 x Dual Tec Detection

#### **Warehouse 2**

1 x Personnel/Fire Doors  
2 x Roller Shutter Door  
2 x Dual Tec Detection

#### **Warehouse 3**

1 x Personnel/Fire Doors  
1 x Roller Shutter Door  
2 x Dual Tec Detection

#### **Warehouse 4**

6 x Personnel/Fire Doors

12 x Roller Shutter Door (6 doors x 2 contacts)  
10 x Dual Tec Detection

**Door Contacts Specifications:**

|               |                                              |
|---------------|----------------------------------------------|
| Device        | White Surface Contact                        |
| Location      | Fitted to top/bottom of the door             |
| Detection     | To detect door opening more than 20mm        |
| Programmed as | Instant Alarm (except entry exit door)       |
| Inhibit       | The user is not able to inhibit this circuit |
| Confirmation  | The device starts the entry exit process.    |
| Environmental | Class 2                                      |

**Dual Technology PIR & Microwave Detector specifications:**

|               |                                                                   |
|---------------|-------------------------------------------------------------------|
| Device        | Combined PIR & Microwave Detector                                 |
| Detection     | To detect movement across a range of 90 degrees through 12 metres |
| Programmed as | Instant Alarm                                                     |
| Inhibit       | The user is not able to inhibit this circuit                      |
| Confirmation  | The device starts the entry exit process.                         |
| Environmental | Class 2                                                           |

**CONTROL EQUIPMENT**

***The following products are designed to comply with PD6662: 2004 AT Grade 3 and environmental class 2.***

An Abatis Orisec 100 Control Panel, complete with the following features, is sited in a final location to be agreed but as per indicated on drawing.

- Up to 100 fully programmable zone
- 25 user codes
- Set types (full set & part set)
- Tamper indication
- Non-volatile Memory (NVM)
- Up to 4 Remote Keypads
- 500 Event Memory
- User Reset
- Alert keys for alarm
- Programmable Output

The control panel and all remote power supplies are to be equipped with battery backup capability so as to provide a supply for up to 12 hours in the event of mains failure.

**Remote Keypad**

An Abatis LCD Touchscreen Keypad is to be sited in the **entrance lobby** to extend all the Control Panel Functions.

An Abatis LCD Keypad is to be sited in the **Warehouse 1** to extend all the Control Panel Functions.

An Abatis LCD Keypad is to be sited in the **Warehouse 2** to extend all the Control Panel Functions.

An Abatis LCD Keypad is to be sited in the **Warehouse 3** to extend all the Control Panel Functions.

An Abatis LCD Keypad is to be sited in the **Warehouse 4** to extend all the Control Panel Functions.

### **Zone Expanders**

A Powered 10 Zone Expander complete with 12V &aH rechargeable battery to be located in the **Main office** adjacent the main control panel.

A panel mounted 10 Zone Expander complete to be located in the **Main office** onboard the main control panel.

A Powered 10 Zone Expander complete with 12V &aH rechargeable battery to be located in the **Warehouse 1** in a final location to be decided.

A Powered 10 Zone Expander complete with 12V &aH rechargeable battery to be located in the **Warehouse 2** in a final location to be decided.

A Powered 10 Zone Expander complete with 12V &aH rechargeable battery to be located in the **Warehouse 3** in a final location to be decided

A Powered 10 Zone Expander complete with 12V &aH rechargeable battery to be located in the **Warehouse 4** in a final location to be decided

A Powered 10 Zone Expander complete with 12V &aH rechargeable battery to be located in the **Warehouse 4** in a final location to be decided

A Non Powered 10 Zone Expander to be located in the **Warehouse 4** in a final location to be decided

### **Mains Supply**

**An unswitched fused spur from a suitable 230v mains supply supplied by others is required to each control panel and powered expander.**

**There will a total of 5 fused spurs required. These must be supplied from the same phase earth supply.**

It is the responsibility of the customer to ensure compliance with BS7871: 2018

### **Survey Conditions**

The specification has been prepared to comply your envisaged requirements. Any unforeseen abnormalities that may occur may be subject to additional costs.

For the purpose of this proposal, it is assumed that ducting complete with drawcord exists for unhindered use by Abatis to pull through Interconnecting cabling for the intruder alarm network.

## Notification and Audible Warning Devices

### Primary Notification

Primary notification will be by method to be via Dual COM Pro DP2 (Grade 2) fitted inside the main control panel.

This method offers dual path signalling with each path being monitored for fault conditions.

The signaling will also pass all relevant signals to EMCS Ltd; our NSI approved Alarm Receiving Centre.

Channels monitored and their associated ARC actions will be provided by SIA reporting.

Responses to alarm activity would be as follows:

- |                                  |             |
|----------------------------------|-------------|
| • Intruder                       | Key holders |
| • Open Close                     | Log only    |
| • Zone Exclude following restore | Key holders |
| • Mains Fail                     | Keyholders  |
| • General Fault                  | Key holders |
| • Confirmed Alarm                | Key holders |
| • Tamper                         | Keyholders  |

### Secondary Notification

AWD (audible Warning Device)

|                    |                                                                                                        |
|--------------------|--------------------------------------------------------------------------------------------------------|
| Device             | A self-activating sounder housed in a polycarbonate enclosure, completed with cover with company logo. |
| Location           | High up on the front elevation of the building                                                         |
| Audible Indication | 110 decibel sounder                                                                                    |
| Visual Indication  | White strobe lights which continues to flash until system is reset.                                    |
| Tamper             | 24-hour protection against removal of lid and housing from wall                                        |
| Environmental      | Class 4                                                                                                |

### Additional Warning devices

This 12-volt loudspeaker supplies internal setting, unsettling and alert indications.

Device 1

Location Ceiling height in the Main Office Entrance Lobby

Device 2

Location Adjacent personnel door in the Warehouse 1

Device 3

Location Adjacent personnel door in the Warehouse 2

Device 4

5

Location                      Adjacent personnel door in the Warehouse 3

Device 5

Location                      Adjacent personnel door in the Warehouse 4

#### Others

Decoy sounder housing are located to each Warehouse building.

#### Please Note

Bell timers are restricted to 10 minutes before silencing. The bells may be activated again if a further alarm occurs following reinstatement of the system.

### **Parameters and Operation**

#### **Setting, part setting, unsetting and re-setting after alarm.**

**Note** - Digital Key - These are electronic key fob devices that replace the need for codes so that the alarm setting / unsetting process can be managed by means of a single action.

#### **Area Setting & Unsetting (Partitions)**

The system is designed to permit setting and unsetting of the office block independently from the workshop (and the opposite is true).

Where one area is unset, a local audible indication will be triggered in the event of an alarm activation in the secured area. If monitoring is selected, additionally a single intruder and confirmed signals may be sent to the alarm receiving centre but because the area that has been disarmed will have sent an open signal to the ARC, alarms triggered would then be sent for Key holder response only.

#### **Setting BS 8243, option 6.3.c (Door Contact on Final Exit Door)**

The setting sequence is started by presenting a Digital Key to the Remote Keypad, and completed by the closing of the final exit shutter door. **There is no specified exit time.**

#### **Unsetting - Entry time = 25 seconds – BS 8243, option 6.4.5 (Digital Key)**

The unsetting sequence is started when an initial entry door is opened and the sequence is completed by presenting the Digital Key to an external proximity reader mounted to the door frame within the entry time limit.

Opening the entry shutter starts the entry timer and confirmed alarms will not be possible during the entry time. The system is then unset by means of the digital key. However, confirmed alarms are possible if the system is not unset and the entry timer expires.

If an alarm condition occurs off the entry route during the entry time then the alarm is indicated and a 30 second timer starts. If the system is not unset, a confirmed alarm will occur when both the entry time and the 30 second timer expire.

If an alarm condition occurs before the entry time is started then this will start the confirmation timer, and if the entry time expires before the alarm system is unset a confirmed alarm will occur provided this is within the confirmation time of **30 minutes**.

*Note: If the digital key fails to unset the system, it will be possible to complete the unsetting by means of a user code, but only after the entry time has expired. This action should only be used as an exception and evidence of repeated use of the code to unset may affect both police response and your insurance.*

*Users should exercise care when using the method of unsetting described in BS 8243: 6.4.5 as it is possible to generate false confirmed intruder alarms if a detector not on the entry route is activated during or after the entry timer expires, which will in turn lead to a waste of police time and possible loss of police response.*

## **System users**

The system offers up to 50 different users on different levels of access, these are –

### **Staff codes (Digital Key) – (equal to EN 50131 user access level 2)**

Each Digital Key is programmed to allow the staff to set, unset, part set and reset after non-policed activations.

### **Manager codes (Digital Key) – (equal to EN 50131 user access level 2)**

Each Digital Key is programmed to allow the alarm manager to set, unset and reset same as the staff, but will also allow various other limited programming functions.

### **Engineer codes – (equal to EN 50131 user access level 3)**

These codes allow the alarm servicing company to set the system parameters and functions and to carry out servicing and engineering work without creating an alarm.

**Please note** – the level 3 engineer access codes cannot be used without prior authorisation by a user or manager Digital Key.

## **Inhibiting/isolating detectors**

The control panel has the facility to allow selected users to inhibit/isolate individual detectors or zones to allow for temporary work to be carried out or following accidental or storm damage to the building or any other suitable reasons. The benefit is that the rest of the system can still be used even if one or more detection device is out of action.

**Note – It must be remembered that there will be no active alarm and no police response in areas where a detector has been omitted. Therefore there may not be any insurance cover on that area. Please check that this is acceptable to your insurer.**

The ability to enable detectors or zones to be inhibited lies with the alarm company and is decided by agreement between the alarm company and the customer.

**Information on Confirmation as required by BS 8243 (Applies to Monitored Alarm Systems in receipt of a Police Response to qualifying activations.)**

In order to reduce false alarms and to ensure there is a high probability of a genuine activation, under the current police (ACPO) policy, the police will only respond to confirmed alarms.

Sequential confirmation, as specified by Abatis Fire & Security, requires that two separate detectors on independent circuits activate, within a pre-defined time window, before a confirmed alarm condition can be notified. Therefore the system has therefore been designed with the intention that an intruder will probably activate at least two detectors before reaching any desirable stock or valuables.

If a single detector activates the alarm, this will be transmitted to an ARC (Alarm Receiving Centre) who will inform the keyholders, **but it will not pass the alarm to the police.**

If a second activation occurs on **a different detector** within the confirmation time of **30 minutes**, the system will send **a confirmed alarm signal** to the ARC, who will then contact the police.

At the end of the confirmation time, if a second activation has not occurred, the system will reinstate, and a further activation will be sent as unconfirmed and the time window will start again. At the time of reinstatement if a detector is still active the system will inhibit that detector and a signal will be passed to the ARC who will inform the keyholders.

**Note:** - Once a confirmed alarm has been passed to the ARC the system must be restored by the alarm company operative and not by the keyholder.

**Important! A requirement of BS 8243**

Due to the previous high incidence of customer error and accidental activation upon entry, your attention is drawn to the fact that if an intruder succeeds in forcing open the initial entry door, a confirmed alarm cannot be generated until the entry time has expired.

#### **Please Note**

It is the customer's responsibility to do regular "walk tests" between maintenance visits to ensure that the coverage provided by all the movement detectors is not impaired in any way. All writing is to be concealed wherever possible.

The payment for this system will be due when the system is handed over at the audible stage. The alarm system has been designed to be flexible enough to accommodate future expansion.

Upon completion you will be issued with an engineering record/log book which we would advise you to keep in a secure place, but readily available for the engineer to fill and record his visits.

The specified area of coverage provided by all movement detectors is to be demonstrated by the installer to the customer at the time of commissioning of the system, and subsequently, following any replacement of the detector as a result of necessary service.

The customer should note that the alterations to the physical structure, building services, furniture or any stock piling at the protected location may adversely affect the area of coverage provided, and in that event the customer should liaise with the company about re-evaluation of the security protection.

It is the customer's responsibility to check the coverage afforded by all the movement detectors by means of regular 'walk testing' checks between the service visits undertaken by the company.

Details of the set positions of the controls for the range and pulse count (if used) and confirmation of any zone blanking of the lenses for all movement detectors are to be recorded by the installer in the system record at the time of commissioning of the system, and subsequently at the time of a service visit, if any changes are made.

The customer or their representative should note that the alterations to the physical structure, building services, furniture or any stock-piling at the protected location may adversely affect the area of coverage provided, and in that event the customer should liaise with Abatis Fire & Security Ltd about re-evaluation of the security protection.

The successful operation of the system requires the active co-operation of the customer in carrying out the necessary procedures carefully and thoroughly. The whole system can be jeopardised by lack of care.

This care must extend to the security of the keys and/or user codes and information regarding the system. Mis-use of the system may result in withdrawal of police response, which could invalidate your insurance policy.

In spite of delivery and installation of the equipment, the equipment shall not pass from the company to the customer until: -

1. The customer shall have paid the price plus VAT in full; and
2. No other sums whatever shall be due from the customer to the company.
3. Until property in the equipment passes to the customer in accordance with clause 1, the customer shall keep the equipment separate from the other goods in its possession and marked in such a way that they are clearly identifiable as the company's property.
4. The company shall be entitled to recover the price plus VAT notwithstanding that the property in the equipment has not passed from the company.
5. Until such time as the property in the equipment passes from the company, the customer shall upon request, deliver up the equipment to the company. If the customer fails to do so, the company may enter upon any premises owned, occupied or controlled by the customer where the equipment is situated, and repossess the equipment.
6. The customer shall not pledge or in any way charge by way of security for any indebtedness any of the equipment, which is property of the company.

## **Section 2**

### **Fire Alarm System**

#### **System Overview**

We have provided for the installation and commission of a 2 wire analogue addressable fire alarm system to comply with BS5839-1

We have provided P2/M coverage to each of the Main Offices and Warehouses 1, 2, 3 & 4.

Electronic sounder units will be distributed throughout the building with the intention of achieving 60dBA throughout the protected area. However, special attention is brought to the audibility test provision included later in this specification.

#### **SMOKE/FIRE PROTECTION**

**Over the Main Building and the 4 Warehouses, we propose the following Sounder, VAD's, Detection & Manual Call Points (MCP's)**

There are a total of

- 44 x Smoke/Heat Detectors
- 21 x MCP's
- 2 x Sounder Bases
- 10 x ESP FireBeam Extras
- 23 x Sounder/VAD's

MCP Protection is mounted at heights of approximately 1400mm.

#### **Detection:**

##### **Main Office Building:**

Sounders, AFD and Manual Call Points throughout the escape routes and high-risk areas

##### **Warehouse 1, 2, 3 & 4**

AFD throughout the main warehouse spaces. MCP's to each final exit and strategic locations to achieve Type M. Sounders or Sounder VAD's to all areas.

##### **Warehouse 1 & 4**

In addition to the AFD throughout the main warehouse spaces there are Sounders, AFD and MCP within the office, recreation and storage areas and escape routes to an L2 level of coverage.

**As the building provides coverage to all areas identified by the customer, this would provide a P2/M category installation.**

## CONTROL PANELS

Each of the Main Office and Warehouses 1, 2, 3 & 4 are to be fitted with networkable control panel. Each of the control panels will be interlinked with cause and effect programming to be determined at commissioning stage.

To facilitate this, each of the 5 control panels are to be fitted with Network Cards.

Each control panel (x4) is located in the **Entrance Lobby to each building** at a height of approximately 1400-1600mm and provides:

- Addressable 2 Wire System
- 2 amp power supply
- Monitored battery charger and supply
- 1 Loop Panel (2 loop for warehouse 4)
- Line monitoring for open and short circuit
- Line monitoring for detector removal
- Up to 2 sounder circuits
- Fault and Fire Relay outputs
- Compliance with EN54 Pts 2,4

### Standby/Battery Back Up

In accordance with BS 5839, all category L & M fire alarm systems must be fitted with a standby power supply for continued operation in the event of a mains power failure.

BS 5839 sets out that in the event of a mains power failure, the backup batteries should be capable of running the system for a minimum of 24hrs, followed by 30 minutes in full alarm state (all sounders circuits in alarm state).

In the case of category P fire alarm, the above statement applies if the building is constantly occupied. In the situation that the premises are not continuously manned, then the standby time may need to be increased to 72hrs.

In this case, stand by power is achieved by using appropriately calculated SLA (Sealed Lead Acid) batteries, the size of which is calculated as follows:

- $C_{min} = [(I1 \times T1) + I2] \times 1.25$

Our design calculation is based on the following:

- I1 (Standby current from the fire alarm panel) = Amps
- T1 (Standby time, assume category L1) = 24 Hours
- I2 (Full alarm current from panel) = Amps
- First multiply I1 (0.05 Amps) by T1 (24 Hours) = 1.2Ah (Amp hours)
- Then add on I2 (0.3Amps) = 1.5Ah
- Then multiply the whole by the aging factor (1.25)
- $1.5 \times 1.25 =$
- C minimum would be determined by our commissioning engineer

This will be verified by our commissioning calculations.

## **Interface Units**

A single dual relay interface to be provided at a specified location providing dual volt free relay contacts for the access controlled doors.

Responsibility to provide the wiring to the interfaces with the access control installer. Connection to the relay will be by Abatis.

## **Mains Supply**

An unswitched fused spur from a suitable 230v mains supply supplied by others is required to each control panel and powered expander.

There will a total of 5 fused spurs required. These must be supplied from the same phase earth supply.

It is the responsibility of the customer to ensure compliance with BS7871: 2018

## **Installation Standards & Detector Spacing**

The proposed installation will comply with the requirements of BS5839p6 including the requirement to protected cabling, fire resistant cabling, and the use of approved plastic coated copper clips in accordance with BS7671 (where new cabling is required).

Detector spacing is crucial to the success of any fire alarm system. The British Standards are specific in relation to the maximum coverage a single detector can achieve.

If detector spacing is not adequate, protection can be greatly compromised.

Our quotation is prepared with these standards and spacing requirements in mind and catered for.

## **Cabling**

The cable proposed to be used for this installation is determined as being 1.5mm 2 core and earth soft skin fire resistant cable.

## **Mains Supply**

A dedicated mains supplies is required adjacent the main control panel by others, to an isolator supplied by Abatis.

It is the customers responsibility to establish compliance with appropriate British Standards.

## **Notification**

### **Primary Notification**

Primary notification will be by method to be via **Dual COM Pro DP2 (Grade 2)** fitted inside the main control panel.

This method offers dual path signalling with each path being monitored for fault conditions.

The signaling will also pass all relevant signals to EMCS Ltd; our NSI approved Alarm Receiving Centre.

Channels monitored and their associated ARC actions will be as follows:

Responses to alarm activity would be as follows:

- |         |                          |
|---------|--------------------------|
| • Fault | Key holders              |
| • Fire  | Keyholder and/or Brigade |

### **Notes**

**Abatis will either supply Zone Layouts from drawings provided by the customer or the customer can provide these themselves.**

### **Choosing Abatis**

When safety of people and protection of property is not an option but a necessity the need to deliver quality, consistent reliability and total customer support becomes imperative. Abatis is an accredited provider of high performance solutions.

Abatis has a reputation for competitive, well engineered solutions with responsive post handover support.

The installation of an Abatis system is more than an investment in safety and protection. It is an investment in security, peace of mind and reliability stretching beyond the product itself.

### **Abatis Systems**

Industry leading technology is at the heart of every Abatis system. Well thought out products provide benefits to the end user whilst reducing the cost to the installer.

The Abatis range of conventional fire systems provides the right balance between costs and features to suit all size and types of projects.

The flexibility of our range of systems combined with the experience of our people means that however complex the specification the solution is never a compromise.

### **At Abatis Service Starts With the Enquiry**

Being a specialist, Abatis have a depth of expertise in understanding the constraints in which systems must function.

When advice is sought from Abatis it can be done in the knowledge that our engineers have a thorough understanding of the appropriate Standards.

We have a level of experience and attention to detail that enables us to comment on a design by others or provide guidance on the level of coverage suited to protect the risk.

### **System Commissioning**

At the end of the installation phase the objective is to move to hand over with the minimum of fuss.

Abatis therefore has a refreshingly simple and straightforward approach to commissioning systems; an inclusive 'stay-on-site' commitment.

Our specialist engineers provide the installer and end user with peace of mind in the knowledge the system will be thoroughly commissioned on time and at the agreed price.

A cost for user training has been included for. Unless stated otherwise, the cost assumes training will take place during the commissioning visit. Any additional visits required for training will be chargeable.

All costs for system commissioning assume free use of power and lighting, and normal hours of working. The commissioning cost allows for sample sound level testing taking place at the time of commissioning.

### **Call Out and Maintenance Service**

Peace of mind means response when you expect it. Call out is available to all users of our systems with engineers operating locally 365 days a year.

Whatever the time of day or night, the user can talk to an engineer and be assured of our prompt on site attendance should it be required.

Rapid response, decisive action and experienced engineers are behind every Abatis installation. Abatis systems are manufactured to the highest standards and carry full warranty, but systems must be maintained by a specialist as required by British Standards.

Maintenance is provided for all installations. This offers a call out service, which guarantees a response not normally longer than 24 hours along with visits to clean and check the equipment as required.

### **Access**

This quotation has been give on the understanding that reasonable access is permitted to our installation engineers.

Our usual working days are from 9am till 5-30pm.

### **Survey Conditions**

The specification has been prepared to comply your envisaged requirements. Any unforeseen abnormalities that may occur may be subject to additional costs.

For the purpose of this proposal, it is assumed that ducting complete with drawcord exists for unhindered use by Abatis to pull through Interconnecting cabling for the fire alarm network.

### **Lift Hire**

Abatis have NOT allowed for lift/scissor lift hire that WILL be required for the duration of the Warehousing works.

Either Abatis can supply at cost to the customer, or the customer can supply to Abatis for free usage.

### **Audibility test**

An audibility test will be carried out to ensure that the sounders proposed achieve the intended decibel levels as required. Should additional sounders be required, additional costs may apply.

### **Terms and Conditions**

Should this quotation be accepted the Abatis Company Terms and Conditions will apply.